

receptor co-regulatory peptidic molecule and a reporter gene the expression of which depends on binding of said nuclear receptor co-regulatory peptidic molecule to a nuclear hormone receptor ligand binding domain via the binding sequence of SEQ ID NO:5, to produce a library of cells that express a library of nuclear hormone receptor proteins to be screened and said co-regulatory peptidic molecule;

- E)
- c. dividing said cells into a first and a second equivalent portions;
 - d. growing said first portion of said cells in the presence of said second molecule to be screened;
 - e. growing said second portion of said cells in the absence of said second molecule to be screened;
 - f. comparing the level of expression of said reporter gene in the cells of said first and second portions;
 - g. optionally repeating steps (d) through (f) using an alternative second molecule; and
 - h. if cells of said first and second portions express said reporter gene at different levels, identifying said pair of molecules as interacting with said nuclear receptor co-regulatory peptidic molecule.

57. (New) The method of claim 56 wherein said polypeptide first molecule is a fusion protein.

58. (New) The method of claim 57 wherein said co-regulatory peptidic molecule is 35 kDa.

59. (New) The method of claim 57 wherein said co-regulatory peptidic molecule is SEQ ID NO: 9.

60. (New) The method of claim 57 wherein said co-regulatory peptidic molecule is SEQ ID NO: 8.

61. (New) The method of claim 56 wherein said co-regulatory peptidic molecule is PNRC-1.

62. (New) The method of claim 56 wherein said polypeptide first molecule comprises a nuclear hormone receptor ligand binding domain.

63. (New) The method of claim 56 wherein said polypeptide first molecule comprises a known nuclear hormone receptor.

E1 64. (New) The method of claim 56 wherein said polypeptide first molecule comprises a candidate nuclear hormone receptor.

65. (New) The method of claim 56 wherein said polypeptide first molecule and said second molecule are selected from the sets of (i) estrogen receptor and estradiol, (ii) glucocorticoid receptor and deoxycorticosterone, (iii) androgen receptor and dehydrotestosterone, (iv) progesterone receptor and progesterone, (v) thyroid hormone receptor and T3, (vi) retinoic acid receptor and all-trans-retinoic acid, and (vii) 9-cis-retinoic acid receptor and 9-cis-retinoic acid.

66. (New) The method of claim 56 wherein expression of said reporter gene causes production of histidine.

67. (New) The method of claim 56 wherein said reporter gene is CAT.

68. (New) The method of claim 56 wherein said cells are selected from the group consisting of yeast cells and human cells.

69. (New) The method of claim 56 wherein said nuclear receptor binds to an aromatase gene.

70. (New) A method of claim 56 wherein said second molecule is selected from the group consisting of a ligand, a hormone and a drug.

E1 71. (New) A screening method for identifying a pair of molecules that interact with a nuclear receptor co-regulatory peptidic molecule having a binding sequence of SEQ ID NO:5 via said binding sequence, wherein said pair of molecules consists of a polypeptide first molecule comprising a nuclear hormone receptor peptide and a second molecule, the method comprising:

- a. providing a cell culture;
- b. cotransfecting said cell culture with a library of nucleic acids that encode said first molecules to be screened, a nucleic acid that encodes said nuclear receptor co-regulatory peptidic molecule and a reporter gene the expression of which depends on binding of said nuclear receptor co-regulatory peptidic molecule to a nuclear hormone receptor ligand binding domain via the binding sequence of SEQ ID NO:5, to produce a library of cells that express a library of nuclear hormone receptor proteins to be screened and said co-regulatory peptidic molecule;
- c. growing said cotransfected cells in the presence of said second molecule to be screened;
- d. determining the level of expression of said reporter gene in individual colonies of said cotransfected cells;

- e. optionally repeating steps (c) through (d) using an alternative second molecule; and
- f. if cells of said individual colonies express said reporter gene, identifying said screened pair of molecules as interacting with said nuclear receptor co-regulatory peptidic molecule.

72. (New) The method of claim 71 wherein said polypeptide first molecule is a fusion protein.

73. (New) The method of claim 72 wherein said co-regulatory peptidic molecule is 35 kDa.

74. (New) The method of claim 72 wherein said co-regulatory peptidic molecule is SEQ ID NO: 9.

E1 75. (New) The method of claim 72 wherein said co-regulatory peptidic molecule is SEQ ID NO: 8.

76. (New) The method of claim 71 wherein said co-regulatory peptidic molecule is PNRC-1.

77. (New) The method of claim 71 wherein said polypeptide first molecule comprises a nuclear hormone receptor ligand binding domain.

78. (New) The method of claim 71 wherein said polypeptide first molecule comprises a known nuclear hormone receptor.

79. (New) The method of claim 71 wherein said polypeptide first molecule comprises a candidate nuclear hormone receptor.

80. (New) The method of claim 71 wherein said polypeptide first molecule and said second molecule are selected from the sets of (i) estrogen receptor and estradiol, (ii) glucocorticoid receptor and deoxycorticosterone, (iii) androgen receptor and dehydrotestosterone, (iv) progesterone receptor and progesterone, (v) thyroid hormone receptor and T3, (vi) retinoic acid receptor and all-*trans*-retinoic acid, and (vii) 9-*cis*-retinoic acid receptor and 9-*cis*-retinoic acid.

81. (New) The method of claim 71 wherein expression of said reporter gene causes production of histidine.

E 82. (New) The method of claim 71 wherein said reporter gene is CAT.

83. (New) The method of claim 71 wherein said cells are selected from the group consisting of yeast cells and human cells.

84. (New) The method of claim 71 wherein said nuclear receptor binds to an aromatase gene.

85. (New) A method of claim 71 wherein said second molecule is selected from the group consisting of a ligand, a hormone and a drug.
